DOCUMENT RESUME

ED 069 203 HE 003 470

TITLE	The Impact of the University of Pittsburgh on the Local Economy. Methodological Appendix.
INSTITUTION	Pittsburgh Univ., Pa. University Urban Interface Program.
BUREAU NO	BR-8-0725
PUB DATE	May 72
GRANT	OEG-2-9-480725-1027
NOTE	69p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Community Benefits; *Economics; Educational Economics; Educational Finance; *Financial Support; *Higher Education; *School Community Relationship; Surveys

ABSTRACT

This document presents the procedures used, the results of, and recommendations concerning a study designed to determine the impact of the University of Pittsburgh on the local economy. Findings include the following expenditures by faculty, staff and students in the Pittsburgh area: (1) Colleges related local business volume--$177.3 million; (2) College related local expenditures--$80.6 million; (3) Local expenditure by faculty and staff--$40 million; (4) Local nonhousing expenditure by local faculty and staff--$28.4 million; (5) Local expenditures by students--$9.7 million; (6) Local expenditures by students in dorms excluding room and board--$2.2 million; (7) Expenditures by students for local rental housing--$2.0 million; (8) Local nonhousing expenditures by students who rent local housing--$3.2 million; (9) Expansion of local banks' credit base resulting from college-related deposits--$12.8 million; (10) Real estate taxes paid to the local government by the college--$170,000; and (11) Real estate taxes paid to local governments by local faculty and staff--$3.2 million. (For related documents see ED 063901 and ED 063902.) (HS)

ED 069203

FILMED FROM BEST AVAILABLE COPY

THE IMPACT OF THE UNIVERSITY OF PITTSBURGH ON THE LOCAL ECONOMY

Methodological Appendix

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

HE 003 470

A supplement to a report prepared by
the Educational Systems Research Group
for the University-Urban Interface Program,
University of Pittsburgh, May, 1972

Distributed by the Office of the Secretary,
University of Pittsburgh, Pittsburgh,
Pennsylvania 15213

CONTENTS

Section		Page
A.	INTRODUCTION	1
B.	HOW THE SURVEY WAS CARRIED OUT	1
	Forms used Introductory and "thank you" letters	
C.	PROBLEMS AND HOW TO SOLVE THEM	2
	1. Getting useful data	2
	2. Selecting a DP package	2
	3. Organization of the data for report-writing	3
D.	COMMENTS ON THE MODELS AND HOW TO USE THEM	4
	1. Scope is limited: capital side could be added	4
	2. Revenues are also important	4
	3. Interstate implications of costs and benefits need more attention	5
	4. Options are open on definition of "local business volume"	5
	5. Improvement needed in evaluation of tax exemptions	6
	6. Competing businesses operated by the university demand more technical analysis than in the models	8
	7. Models dealing with the value of business property and inventories could well be deleted	9
	8. The community's costs of educating college-related children need further analysis and theory to guide impact research	9
	9. More elaborate multipliers needed on banking	9
	10. Owned housing as well as rented housing needs to be considered in college persons' expenditures	10
	11. More attention is needed to whole question of the expenditures of people visiting the institution	10

CONTENTS (Cont'd)

Section		Page
12.	The ultimate challenge is to measure the cultural impact of the university or college	11
E.	SELECTED FORMS AND SURVEY ADMINISTRATIVE AIDS	11
	Economic impact study variable Day-at-a-GLANCE diary page Contact list Economic impact study diary Project files used in the Pittsburgh study	
F.	DIRECT APPLICATION OF THE CAFFREY-ISAACS MODELS	12
	Models with Pittsburgh study data	
G.	DEFINITIONS OF THE MODELS EXTRACTED FROM THE CAFFREY-ISAACS REPORT	21
H.	PERSPECTIVES ON ECONOMIC IMPACT STUDIES AND RELATED POSSIBLE EXTENSIONS OF THE INVESTIGATION	40

oOo

The Impact of the University of Pittsburgh on the Local Economy (Washington, Educational Systems Research Group, 1971)

METHODOLOGICAL APPENDIX

A. INTRODUCTION

The twin objectives of the Systems Research Group's study of the economic impact of the University of Pittsburgh were to test the Caffrey-Isaacs methodology[1] and in the course of doing so to provide a useful service for the University of Pittsburgh and other institutions that might wish to do similar studies in future.

In this technical note we discuss how the survey was carried out, its problems and what we think should be done about them in future studies, and a series of specific comments on the models tested.

B. HOW THE SURVEY WAS CARRIED OUT

Information was collected by personal interview, from university and public records, and from specially designed surveys of the spending patterns of faculty, staff, and students both on and off campus. The attached letter of July 8, 1971 from Chancellor Posvar introduced the project to the University community and requested co-operation.

The three survey forms attached[2] have been annotated to show needed improvements that were indicated by their full-scale use. Study teams should, we believe in retrospect, seek out the most interested and qualified survey design experts on the campus and make sure they are part of the "internal advisory committee" that is usually set up for projects like this one. Since these people are bound to be heard from, they are much better brought into the picture when their views can be made use of in project design.

---

1 See John Caffrey and Herbert H. Isaacs, Estimating the Impact of a College or University on the Local Economy (Washington, American Council on Education, 1971). The report of the study is available through the Secretary of the University.

2 The residence students' form is a revised version of a cruder one used initially. Response from this survey was good because Residence Assistants in the employ of the University backed up the survey and urged the students to reply.

UNIVERSITY OF PITTSBURGH

CHANCELLOR OF THE UNIVERSITY

TO: Provost, Vice Chancellors, Deans, Directors and Department Heads

FROM: Chancellor Wesley W. Posvar

DATE: July 8, 1971

SUBJECT: Study of the University's Economic Impact

Under the auspices of the University-Urban Interface Program (UUIP), we are embarking upon a study of economic impact of the University of Pittsburgh upon its community. The study will be conducted under the direction of Dr. John Caffrey, President of the Educational Systems Research Group (ESRG) and former Director of the Commission on Administrative Affairs of the American Council on Education (ACE). Dr. Caffrey and Dr. Herbert H. Isaacs recently completed a book, Estimating the Impact of a College or University on the Local Economy, published by ACE, which provides the basic model. In such an effort it is important that full access to University records be facilitated, as well as information derived from public records and some special surveys as appropriates. Mr. George Mowbray, ESRG's principal investigator, will be housed at CL 451, extension 7508.

We fully expect that this undertaking will be of value to the University and the community which it serves. Moreover, this base line study represents only a first step because the associated procedures may enable us later to conduct subsequent studies that allow trend analysis. The study will be led by ESRG personnel advised and assisted as needed by University staff and community representatives.

Agreement on the project occurred on June 1, 1971, and work began immediately. Research should be completed and available in September. Because of this schedule, your full cooperation is essential in facilitating the successful completion of this effort, especially in providing information from University records in your area of administration. The attached description of the book and procedures may be of interest to you. We hope that the research will be completed and results available durin September, 1971.

An internal advisory group will be established to provide access to University records and information on activities as well as advice on interpretation and methods. Similarly, an external group composed of representatives of government, business, and other organizations also will be established to perform comparable functions.

If you need additional information about this study, please call Mr. Louis Tronzo, Assistant Director, Office of Government Relations, extension 6376, who will be the principal liaison or Dr. Robert Brictson, Director of Research Programs, extension 6597.

PLEASE RETURN TO UUIP, ROOM 124, CATHEDRAL OF LEARNING

RESIDENCE STUDENTS

TO: Residence Students

FROM: John Vrana, Student Housing Office

DATE: September 20, 1971.

SUBJECT: SURVEY OF STUDENT SPENDING PATTERNS

As part of the University-Urban Interface Program, we are trying to find out how much money residence students spend each term -- aside from their residence fees.

Students are an important part of the university in economic ways, as well as academic and social. The facts gathered in this confidential and anonymous survey will be combined with other information in a project now underway to measure the over-all economic impact of Pitt on the surrounding community. We need your help on this important study. The objective facts collected will help clarify and, I hope, improve relationships between the university and the people outside it.

Will you please take a few minutes and answer the questions below? Use the campus mail to send your reply to the study headquarters in Room 124 Cathedral. Thank you.

Your participation in this survey is much appreciated.

CARD NO. ☐☐☐☐☐ 1 2 3 4 5

1. What university class are you in now?

(Please enter code number in box)

	Code
Freshman	1
Sophomore	2
Junior	3
Senior	4

☐ 6

2. Which residence do you live in?

	Code
Towers	1
Quadrangle	2
MCNR	3
Koch	4

☐ 7

3. Where is your home? (Code one only)

	Code
City of Pittsburgh, proper	2
Allegheny County outside Pittsburgh	3
Pennsylvania other than Allegheny County	4
Out of state	5

☐ 8

(over)

4. To help us assess the economic impact on the community of expenditures by you and other students in the dorms and residences, please estimate the amount of money you spend per term, in each of the respective geographic regions -- on the items listed. (The totals of the amounts listed per item in columns B through F should equal the amount entered for that item in Column A.)

TRY TO AVOID COMPLEX STUDY AREAS

Type of Expenditure / Where	A TOTAL	B On Campus and Oakland Area	C In Other Parts of Pittsburgh	D Allegheny County Outside Pitts-burgh	E In Penn-sylvania Outside Allegheny County	F Out of State
1 Durables (radios, TV, etc.)	9 10 11	12 13 14	15 16 17	18 19 20	21 22 23	24 25 26
2 Travel outside Allegheny County	27 28 29	XXXXXXXX	XXXXXXXX	XXXXXXXX	30 31 32	33 34 35
3 Clothing						
4 Outside meals and food						
5 Books and supplies						
6 Entertainment						
7 Medical and Dental care						
8 Car & local transport					XXXXXXXXX	XXXXXXXXX
9 Telephone and postage						
10 Laundry and cleaning						
11 Personal care items						
12 Miscellaneous not listed						
Subtotal 3-12	36 37 38	39 40 41	42 43 44	45 46 47	48 49 50	51 52 53
TOTAL, all items	54 - 57	58 - 61	62 - 65	66 - 69	70 - 73	74 - 77

5. Pitt people's savings in local banks help support the supply of funds for local borrowers. Will you please indicate in the spaces provided, the amount of money you typically have on deposit in Pittsburgh banks? (Short-term deposits for use while you're at school)

Please indicate typical mid-term amount ⟶ $ [ ] [ ] [ ]
78 79 80

Better to use two separate forms

SURVEY OF OFF-CAMPUS STUDENTS AND COMMUTER STUDENTS
HOUSING AND SPENDING PATTERNS

CARD NO. [ ][ ][ ][ ][ ]
1 2 3 4 5

This survey is anonymous and confidential. It is designed to help us at Pitt gain some additional insights into off-campus and commuter students' situations, spending patterns, and attitudes. Your cooperation in replying will be helpful in several ways -- in housing policy and in clarifying Pitt's relationships with the surrounding community and the state.

Please check (✓) the appropriate box, or enter the number requested in the question. (Commuter students please answer questions 1 to 5 only; others, all questions, please.)

needs emphasis

1. Do you live at home and commute to the University or do you live in other off-campus quarters?

	Code	
Live at home	1	
Have other off-campus quarters (including all students who have set up temporary local households)	or 2	[ ] 6

2. University Class

		Code	
Freshman	0-39 credits	1	
Sophomore	31-59 credits	2	
Junior	60-89 credits	3	
Senior	90-120 credits	4	[ ] 7
Graduate Student		5	

3. The economic impact of Pitt extends through the city, county, and state, depending on where student live while attending the University.

Where do you live while at school? (code one only)

	Code	
In the Oakland district	1	
Elsewhere in the City of Pittsburgh	2	
Allegheny County outside Pittsburgh	3	
Pennsylvania outside Allegheny County	4	[ ] 8
Out of state	5	

4. To help us assess the economic impact on the community of expenditures by you and other students outside the dorms, please estimate the amount of money you spend per term, in each of the respective geographic regions, on the items listed. (The totals of the amounts listed per item in columns B through F should equal the amount entered for that item in column A). You may find it easiest to begin by entering the totals for each item in Column A, and then breaking this sum down into any appropriate geographic components.

Where ▶ / Type of Expenditure ▼	A TOTAL (per term)	B On Campus and Oakland area	C In Other Parts of Pittsburgh	D Allegheny County Outside Pittsburgh	E In Pennsylvania outside Allegheny County	F Out of State
1 Durables (radios, TV, etc.)	[ ][ ][ ][ ] 9 10 11	[ ][ ][ ][ ] 12 13 14	[ ][ ][ ][ ] 15 16 17	[ ][ ][ ][ ] 18 19 20	[ ][ ][ ][ ] 21 22 23	[ ][ ][ ][ ] 24 25 26
2 Travel outside Allegheny County	[ ][ ][ ][ ] 27 28 29	XXXXXXXX	XXXXXXXX	XXXXXXXX	[ ][ ][ ][ ] 30 31 32	[ ][ ][ ][ ] 33 34 35
3 Clothing						
4 Outside meals and food						
5 Books and supplies						
6 Entertainment						
7 Medical and Dental care					XXXXXXXX	XXXXXXXX
8 Car and local transport						
9 Telephone and postage						
10 Laundry and cleaning						
11 Personal care items						
12 Miscellaneous, not listed						
Subtotal 3-12	[ ][ ][ ][ ] 36 37 38	[ ][ ][ ][ ] 39 40 41	[ ][ ][ ][ ] 42 43 44	[ ][ ][ ][ ] 45 46 47	[ ][ ][ ][ ] 48 49 50	[ ][ ][ ][ ] 51 52 53
TOTAL, all items	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]

Preferable to avoid complex study areas and keep "distribution" simpler and easier to understand

OFF-CAMPUS STUDENTS
+ COMMUTERS

UNIVERSITY OF PITTSBURGH
PITTSBURGH, PENNSYLVANIA 15213

OFF-CAMPUS HOUSING OFFICE

Office of the Vice Chancellor, Student Affairs

TO: Off-Campus Student and Commuters

FROM: Ronald R. Cowell RRC

DATE: October 4, 1971.

Survey sent out under formal initiation of a "student service" official, not the study group or the Vice Chancellor concerned.

SUBJECT: SURVEY OF HOUSING AND OTHER ASPECTS OF STUDENTS' ECONOMIC IMPACT ON THE COMMUNITY

This office is trying to develop a better understanding of student housing needs. How are they being met?

We are also supporting an important new study of Pitt's economic impact on the City of Pittsburgh and surrounding areas. This study is part of the University-Urban Interface Program designed to clarify and improve the university's linkages to the community.

All of us know that a lack of facts of how the university relates to the welfare of the community is a potent source of misunderstanding. In this case, students spend considerable amounts of money while at university; these sums go into the support of local businesses and governments, and would not do so if the university were not here.

The information which you give us on the economic aspects of your life at Pitt will form a basic part of the economic impact study. The study is being carried out by Dr. John Caffrey and his associates in the Educational Systems Research Group, Washington. If you have questions on this project, call me on Extension 7433, including any questions on off-campus housing.

The university needs your help on this survey, on both housing problems and how you spend your money while at school. The survey is confidential and anonymous. Will you please fill out the questionnaire now?

In returning the completed forms to the study group, you can mail them in the enclosed return envelope, either in the U.S. Mail or the campus mailing system.

Thank you for your co-operation in the collection of the information requested. Do not write your name or address on the forms or the envelope.

Type is too small for legibility. "Sell" could be a bit longer, perhaps. Should be backed up by articles in papers read by students, or campus radio, etc.

(The remaining questions are for students in off-campus housing only)

5. Where is your home? That is, where did you come from to attend Pitt? (code one location only)

	Code	
City of Pittsburgh, proper	2	☐
Allegheny County, outside Pittsburgh	3	78
Pennsylvania outside Allegheny County	4	
Out of state	5	

(end of card 1)

CARD NO. ☐☐☐☐☐ (1 2 3 4 5)

6. (a) If you and perhaps other students with you own your house or other dwelling, what real estate tax did you pay in 1970? $ ☐☐☐☐ (6 7 8 9)

(b) If you are renting accommodation while attending Pitt, what is your current rent per term? $ ☐☐☐☐ (10 11 12 13)

stress!

respondents confused months & terms months might be better

7. How many children, if any, do you have who are attending local schools in the community? Please enter the number of such children in each appropriate box. It is not necessary to enter zeros in categories that do not apply.

Type of School ▼ / Where ▶	In City of Pittsburgh	Allegheny County Outside Pittsburgh	In Pennsylvania Outside Allegheny County	Out of State
Public elementary or secondary	14	15	16	17
Private elementary or secondary	18	19	20	21
Church elementary or secondary	22	23	24	25
Community college (public only)	26	27	28	29
University of Pittsburgh	30	31	32	33
Other college or university (if one)	34	35	36	37
Other college or university (if two)	38	39	40	41

students may not have enough children to justify inclusion of this question

8. Did you pay any local taxes in 1970 other than real estate and state sales tax?

Code: Yes 1, No 2 ☐ (42)

more explanation of taxes would help

9 If your answer to question 8 was "yes", will you please estimate how much your 1970 tax payments were?

City of Pittsburgh (wage, occupation, etc.)	$ ☐☐☐	43-45
Allegheny County & towns	$ ☐☐☐	46-48
State of Pennsylvania (car, licenses, etc.)	$ ☐☐☐	49-51

10. Students earn and bring money to Pittsburgh during their period at Pitt. This has a positive influence on the local financial community. Will you please therefore record how much money you typically have on deposit in banks at mid-term.

	Amount Enter No.		Location Code (see below)	
Checking account (demand deposit)	$ ☐☐☐☐	51-54	☐	55
Savings account (notice deposit)	$ ☐☐☐☐	56-59	☐	60

deleted column error

use matrix code like type of school instead of split column as here

Location of Main Account	Code		Code
City of Pittsburgh	2	Pennsylvania outside Allegheny County	4
Allegheny County outside Pittsburgh	3	Out of State	5

11. While attending Pitt, do you live alone or with a group that includes other persons in your particular dwelling unit (room, house, apartment, etc.)? Please enter the number of such persons in the box at right. Enter zero if you live alone.

Number of persons in your dwelling unit ☐ 61

12. To give us some idea of the density of accommodations, please enter in the boxes at right the number of rooms in the dwelling unit referred to in the previous question. We refer to your own unit, not all those in your building. Do not count bathrooms, but do count dining areas that are not separate rooms, include kitchens. Count efficiency apartment as one room. ☐☐ 63 64

13. Do you have your own kitchen or access to such cooking facilities, or do you mainly eat out?

	Code	
Can Cook in	1	☐ 65
Mainly eat out	2	

14. How many terms have you been at Pitt? ☐ 66

How many off-campus places have you rented during that period? ☐ 67

15. According to your own ideas and expectations as a student, how do you "rate" your present off-campus accommodations?

	Code	
Good	1	
Fair	2	☐ 68
Below Average	3	
Terrible	4	

16. How did you find your present quarters?

	Code	
Had lived in same building before	1	
Newspaper listing	2	
Real estate agent	3	☐ 69
Friends	4	
Pitt Off-Campus Housing Office	5	
Other University source	6	
Knocked on doors, looking	7	
Other sources	8	

17. Various things might be done to improve your off-campus housing situation. Some are more feasible, or practible, than others. Please rate the following possibilities dealing with an Off-Campus Housing Register:

Very Good idea	4
Fair idea	3
Not very useful	2
Useless	1

(Please enter code number in boxes 70-76 only) ▼

Ideas:

a) Listing of available rooms, apartments and houses for rent which would be maintained in the Off-Campus Housing Office (contains information about address, phone number, cost, number of rooms, etc.). ☐ 70

b) Distribution of supplementary information such as maps, information about leases, tenant rights, health and safety codes, and human relations laws. ☐ 71

c) Assist students who wish to file complaints about violations of health, building or human relations laws and codes. ☐ 72

d) Having telephone available in Off-Campus Housing Office for use by students seeking housing accommodations. ☐ 73

e) Have University car available for use by Off-Campus Housing staff to assist students who wish to visit units listed in Off-Campus Housing files. ☐ 74

f) Housing counselling service which related cost and quality of available housing to needs and finances of any student requesting such assistance. ☐ 75

g) Have inspectors available to inspect housing accommodations at the request of student tenants. ☐ 76

h) Any other actions that you feel would be useful:

_____

_____

_____

_____

DO NOT USE ☐☐ 77 78

Thanks for answering these questions. Please return the completed questionnaire without your name or address, to the address on the return envelope:

Mr. George Mowbray
Educational Systems Research Group
Room 124, Cathedral of Learning
University of Pittsburgh,
Pittsburgh, PA 15213.

Boxes not properly aligned for computer with questions
- worked design layout from rough sketches

Above housing questions were incorporated to provide useful, needed data; also to give off-campus students some incentive to answer the survey as a whole

FACULTY AND STAFF

UNIVERSITY OF PITTSBURGH
PITTSBURGH, PENNSYLVANIA 15213

OFFICE OF THE SECRETARY

October 6, 1971

TO: All Faculty and Staff (full-time only)

FROM: Albert C. Van Dusen
Secretary of the University

SUBJECT: Confidential Survey of Spending Patterns of Pitt Faculty and Staff who were employed by the University last year

The Chancellor has asked the Vice Chancellors, Deans, and Department Heads to enlist the support of all members of the faculty and staff of the University in supplying information for an objective study now being made of the economic impact of Pitt on the surrounding communities.

The study is being conducted under the auspices of the University-Urban Interface Program, with the sponsorship of the U. S. Office of Education. It is under the direction of Dr. John Caffrey and his associates in the Educational Systems Research Group, Washington consultants. Dr. Caffrey has written on this subject as former Director of the Commission on Administrative Affairs of the American Council on Education.

We all know that a fruitful source of misunderstanding between the University and outside groups is a lack of mutually acceptable facts of the type we are now seeking--in this case how faculty and staff members spend their University earnings. The University has a very considerable direct economic impact on the community, both in construction and in day-to-day operations. This is what Dr. Caffrey is trying to measure for the enlightenment of all concerned. The facts you are being asked to supply are confidential and anonymous. Your name should not be written on these forms. Your privacy is fully protected.

A number of people within the University and in agencies outside it are assisting in the compilation of facts for analysis by Dr. Caffrey and his principal investigator, Mr. George Mowbray. Your part in this procedure is vital.

Please return the questionnaire in the campus mail directly to:

Mr. George Mowbray
Educational Systems Research Group
Room 124, Cathedral of Learning

Will you take a few minutes and answer these questions now? Thank you. If you did not work for the University during the year ended last June 30, please do not reply to the survey questions.

Caused some austere comments since it takes longer than this. Letter basically good and very

12

UNIVERSITY URBAN INTERFACE PROGRAM

[ ][ ][ ][ ] 1 2 3 4

Questions that Pitt faculty and staff members are being requested to answer as part of a study of the direct impact of the university on the local economy.

This is an anonymous survey. Do not record your name or address or official position. Your co-operation in coding your own answers as instructed ensures that you control these answers completely. Please return to Mr. George Mowbray, Educational Systems Research Group, Room 124, Cathedral of Learning.

1. Is your Pitt job faculty or staff? (Please enter appropriate code in box)

alpha identifiers not needed here & elsewhere

(a) Primary appointment as a member of faculty — Code 1
(b) Primary appointment as a member of staff — 2

[ ] 5

(If you do not answer questions 1 and 2, your return will have to be discarded because of sampling rules.)

2. As you see it, is your Pitt job part-time or full-time?

(a) Part-time
(b) Full-time (Please enter no. in box at right) — Code 1, 2

[ ] 6

(IF PART-TIME PLEASE DO NOT COMPLETE THE OTHER QUESTIONS)

3. Are other members of your household employed?

(a) No, I am the only one — Code 1
(b) Yes, other members work, too, but not for Pitt — 2
(c) One or more works for Pitt — 3

[ ] 7

4. Do you earn the largest income in your household?

(a) Yes — Code 1
(b) No — 2

[ ] 8

5. Your sex

(a) Male — Code 1
(b) Female — 2

[ ] 9

6. Where do you live while working at the university? (code one only)

(a) In the Oakland area — Code 1
(b) In the City of Pittsburgh, proper — 2
(c) In Allegheny County, outside Pittsburgh — 3
(d) In Pennsylvania, outside Allegheny County — 4
(e) Outside the state — 5

[ ] 10

7. How many children do you have, either your own or those you look after as members of your household?

delete double box

Enter Number [X] 11 12

8. The study group would like to know how many of your children attend school in one or more of the four distinct areas being studied. Also, what kind of school do they attend? Please enter the number of children (1 to 9) in the appropriate boxes, below. No zero's needed. Include only those under 23 years of age.

Type of School \ Where	In City of Pittsburgh	Allegheny County Outside Pittsburgh	In Pennsylvania Outside Allegheny County	Out of State
Public elementary or secondary	13	14	15	16
Private elementary or secondary	17	18	19	20
Church elementary or secondary	21	22	23	24
Community college (public only)	25	26	27	28
University of Pittsburgh	29	30	31	32
Other college or university (if one)	33	34	35	36
Other college or university (if two)	37	38	39	40
Not in school	—	XXXXXXXXXX		

Try to avoid 4-part study areas on the questionnaire. Every household answers correctly & quite nearly all respond to this basic question on receiving

9. Do you rent or own your home?

Code Rent 1
Own 2

41

(as a Pitt employee,

10. For the year ended December 31, 1970, please indicate the amount of money (in round dollars) that you paid in local taxes and other levies (max. allowed on ~~return~~ question is $999)

(enter amounts for each tax)

(a)	Wage tax	42-44
(b)	Real estate tax	45-47
(c)	Water rate	48-50
(d)	Sewerage tax or sanitary authority	51-53
(e)	Occupation tax	54-56
(f)	Personal property OR other taxes (ex federal)	57-59

Need 4 digits

Watch out for taxes -- sales, gasoline, state income, etc. Be sure definitions are clear

11. In order to check on the representativeness of the sample of survey returns, the study group would like you to check off, in the boxes provided here, the earnings range in which your 1970 income from Pitt fell.

(a)	Less than $4,500	Code 1
(b)	4,500- 5,499	2
(c)	5,500- 6,999	3
(d)	7,000- 9,999	4
(e)	10,000-14,999	5
(f)	15,000-19,999	6
(g)	20,000-24,999	7
(h)	$ 25,000 or more	8

60

Note: The income indicated should include all sums you received for your work, from the university, regardless of the source of the funds; it should not include reimbursements for expenses or earnings from consulting or other outside work.

Also, what percentage of your total family income is represented by the money you earn through Pitt?

X %

12. Aside from the foregoing tax payments, the study group would like to know something about how you spent your last year's income. Of your total family income before taxes, from all sources, what was the percentage spent on:

Make instructions more specific

(a) Rent OR the corresponding costs of home ownership (mortgage payments, taxes, fuel, insurance, maintenance, etc.). ☐☐ % (61 62)

(b) Durable goods purchased (car, appliances, TV, boats, sports equipment, etc.). ☐☐ % (63 64)

(c) Travel outside the Pittsburgh area (excluding business travel paid for by someone else). ☐☐ % (65 66)

(d) All other personal expenditures on consumer goods and services (including food, clothing, personal services, medical and dental care, recreation, insurance, car operation, etc.); (excluding all taxes paid directly to local, state and federal governments). ☐☐ % (67 68)

Add question on charitable donations →

Note: The total of these percentages will not be 100%. The balance = taxes and savings, including annuity contributions.

Should question include disposition of net assets such as savings. Might be easier to answer a more exhaustive question

13. Because the study is concerned with not only how much you spend on various things, but also where you spend these sums, will you please indicate below the percentage of your non-housing expenditures (excluding local taxes) that you made last year in each of the following areas?

Enter percentage in each pair of boxes

(a) City of Pittsburgh, proper 69-70 ☐☐ %

(b) In Allegheny County, outside Pittsburgh 71-72 ☐☐ %

(c) In Pennsylvania, but outside Allegheny County 73-74 ☐☐ %

(d) Outside the state (including federal taxes) 75-76 ☐☐ %

14. Savings of Pitt faculty and staff help supply funds for local banks to lend , thus supporting the finances of the community. Will you please record below how much money you have now, or usually have, on the average, in checking and savings accounts? (Refers only to those in Pittsburgh area). Please code the number range indicated in the coding table below.

Bank range code ← Need wider ranges, especially above $1,000.

Under ~~$100~~ 300 (1)	$300 - 399 (4)	$600 - 799 (7)	Checking Account	☐ 77
$100 - 199 (2)	$400 - 499 (5)	$800 - 999 (8)		
$200 - 299 (3)	$500 - 599 (6)	~~$1,000~~ 10,000 or more (9)	Savings Account	☐ 78

etc. etc.

15. How many active charge accounts do members of your family now have in stores and other businesses in the greater Pittsburgh area? ☐☐ 79-80

THANK YOU FOR YOUR HELP IN ANSWERING THESE QUESTIONS

All the cautionary points by survey designers in pre-testing are well made, in our view. We did some pre-testing, but not enough. If a survey is not to be conducted by means of "adaptable" depth interviewing techniques, or backed up with these, a correspondingly greater care has to be taken to pre-test -- not only on "test respondents" but through solicitation of outside expert opinion. The fresh eye can often pick up flaws readily.

A final document is attached to this section of the Appendix: a thank-you note from the principal investigator (Dr. Van Dusen) and research director (Dr. Brictson) of the University - Urban Interface Program to all those who contributed time and counsel to the economic impact study.

UNIVERSITY OF PITTSBURGH
PITTSBURGH, PENNSYLVANIA 15213

ALBERT C. VAN DUSEN, *Secretary of the University*

April 24, 1972

During the development of the prototype study on "The Impact of the University of Pittsburgh on the Local Economy", the Educational Systems Research Group and its parent organization, the Systems Research Group, relied heavily on the cooperation and assistance of knowledgeable local persons both within the University and the community. The University and both consultant organizations hereby express their deep appreciation for your help in the effort. The final report was published and released on April 21, 1972, following research conducted in the Fall of 1971. As you know, the study is based on models formulated in the 1971 American Council on Education Report entitled Estimating the Impact of a College or University on the Local Economy. Our report is a prototype case study tailored to the circumstances and assumptions which uniquely apply to the University of Pittsburgh and its community. Many hours of consultation by local persons, individually and in groups, were indispensable to the successful completion of the effort.

In the future the University intends to continue to analyze the data produced in the study and to perhaps do follow-up studies in the years ahead. Such studies will utilize improved techniques, refined assumptions, and possibly develop nuances based on the valuable experiences of the first effort of which you were a part.

Again, please accept our most sincere thanks. We hope that you will find the accompanying document of interest.

Sincerely,

Albert C. Van Dusen
Principal Investigator and
Secretary of the University

Robert C. Brictson
Director of Research Programs

ACVD:RCB.ms
Enclosure

C. PROBLEMS AND HOW TO SOLVE THEM

1. Getting Useful Data

Everyone who has tried to do a college or university impact study has remarked on the lack of institutionally available data on faculty, staff and students. This is not surprising, and it calls for special sample surveys of the spending units concerned.

We have seen more complex questionnaires than those we used in the study, but feel that complexities invite low response and poor data. We had a reasonably good response -- from 20% to 40% (off-campus students to faculty) -- but a high proportion of unusable returns. From approximately 12,000 questionnaires that got to respondents, we wound up with a total of 1990 that could be processed (1027 from students and 973 from faculty and staff). The original coverage was:

Faculty and Staff	5500	
Residence Students	3500	
Other students	3000	(out of about 12,000)
1990 = 17% of total:	12000	

In terms of responsiveness, the off-campus students were least interested in replying to the survey. The co-operation of faculty and staff was somewhat better. The study serves to reinforce our view that making surveys of members of the university community requires special care. We would recommend more attention to education and persuasion of respondents in future efforts of this type.

Moreover, our experience with anonymous,[1] "no-follow-up" surveys of the type carried out here raises serious questions in our mind about the use of remote survey techniques such as mail questionnaires. There would be much to be said for microsampling and interviewing, getting far fewer but more reliable data -- we well as on-the-spot feedback on the degree to which the questions themselves were making sense to the respondents. Sequential interviewing techniques look very attractive for this type of project.

2. Selecting a DP Package

The University of Pittsburgh had an IBM 360/50 computer available for our data processing on the project. We found the use of this local "utility" advantageous in

---

[1] We felt, and still do, that one should not try to use identified questionnaires in a university sample, for obvious reasons. This means one cannot follow-up non-respondents.

terms of both ease of use and processing cost. With the help of the Department of Measurement and Evaluation, we applied the SPSS package[1] of computer programs to the punched cards of the four survey sets:

- Faculty and staff
- Residence students
- Off-campus housing students
- Commuters (students who live at home)

The following reports were delivered on each survey:

1. Listing of each piece of input data, the number of its occurrences, and the cumulative percentage of respondents. This was useful for seeing secondary peaks in the distribution and for analyzing the quartiles;

2. Count of responses and missing data elements;

3. Arithmetic mean and median and standard deviation of replies to each question.

3. Organization of the data for Report-Writing

A compromise appears to be necessary in the application of the Caffrey-Isaacs models. Ideally, one would make up files on each aspect of the analysis, identify the data elements, and find them through research. The project we have done did not fit this simple pattern. In many cases, substantial pieces of the data set were in the hands or files of single officials of the University or the community; and it was necessary to interview or otherwise tap these files in a comprehensive way. Hence, the breaking out of the individual elements was a secondary task, not a primary one.

Furthermore, the models do not lend themselves to the writing of interesting reports that contain some of the unique features of the institution being studied. We used the models as guides primarily to ensure that we did not leave something important out of the analysis. In writing the report on the study, we broke it up into a series of smaller stories about interesting facets of the university's impact on the local economy.

---

[1] SPSS - Standard Package for the Social Sciences, a program developed at the University of California at Los Angeles. It has a set of standard analyses that can be called for with very few cards and with a minimum of prior coding of the variables.

As is explained below, too, we supplemented the models with additional kinds of analysis: the impact of past and current university construction, and the "human capital" generated by the University of Pittsburgh in the form of extra earning power of living alumni.

D. COMMENTS ON THE MODELS AND HOW TO USE THEM

The Caffrey-Isaacs models held up fairly well considering their novelty and limited testing to date. As their originators pointed out (p.2):

> "Although the models and procedures suggested are based on careful study, sound reasoning, and limited field trials, it is very likely that certain factors may have been overlooked or incorrectly related to other factors. It should be emphasized that this guide's approach is experimental ... the authors will appreciate ... any suggestions for the improvement of the models or of their presentation in this volume."

Based on the implementation of the models and related work at the University of Pittsburgh, the following are our suggestions and comments:

1. Scope is Limited: Capital Side Could be Added

The Caffrey-Isaacs models are limited in economic scope, being first of all confined to the annual operating outlays of the college and the people who work or study in it. In the Pitt study, we incorporated a review of the University's past and current (and a little of its future) construction and land acquisition program. Even more work might be done in including questions of faculty and staff about the form and location of their assets as well as those of the institution itself. We also added a section on "human capital".

2. Revenues are also Important

The disposition of university operating funds, and their direct economic effects, may have different social or political implications depending on where the operating money comes from. Hence we added a short analysis of the sources of Pitt operating money -- showing, for example, that none of it comes from either the city or the county except in the form of tax exemptions. The shares of students, state, and private donors are interesting and throw light on the transfers implicit in the expenditures. More could be done on cross-analysis than we undertook in this initial study, especially on the local incidence of state taxation and expenditures.

3. Interstate Implications of Costs and Benefits Need More Attention

Although it is obviously easier to confine the definition of the "local economy" to the town in which the university is located, it is almost impossible to avoid getting into the impact on the surrounding county. And since the state has, in most universities, a stake in operational and capital financing, it too needs attention. Finally, interstate effects -- for example the amount of money spent by out-of-state students as against their subsidy or lack of it from the state -- are among the more detailed implications of impact analysis. We did not have the budget and data to do much more than make a start on this subject, but the models need to be understood to be expandable to more than one definition of the "local" area.

4. Options are Open on Definition of "Local Business Volume"

The Caffrey-Isaacs report is not specific in its recommended definitions of local business (See Appendix N, p.66). If one includes many different levels, there is double counting. The problem is to get a set of local economic data that match the commodity and service categories of institutional and personal expenditures. If properly handled, one can pick any set of definitions that is manageable and deemed to be relevant.

In the Pitt study, we could obtain no commodity analysis of what the university bought, and did not attempt to ask detailed questions of staff and students on their purchases -- confining questions to 4 categories: housing, durables, travel, and nondurables. This list could be enlarged, but the more the detail the greater the data-gathering problem. For local business volume, to give a background number and an order of magnitude, we took retail sales as reported by Sales Management magazine.

One has to be careful about double counting in industrial production analyses. An end product represents a "value added" to the raw or partially completed products or sub-assemblies received at its place of completed production.

The primary qualification of an indicator is that it be simple and understandable, to minimize interpretive confusion. In this sense "retail sales" is reasonably clear-cut as long as one has a definition of the scope of the definition beyond the obvious categories of consumer goods.

Professor William A. Strang, in his study of the impact of the University of Wisconsin on the local economy[1] set out an industrial object list for (in the example) student local expenditures. The categories are exemplified in the accompanying table.

5. Improvement Needed in Evaluation of Tax Exemptions

In their report (p.25), in model G-4, Caffrey and Isaacs suggested a way of estimating the amount of taxes foregone by local governments as a result of university tax exemptions. As reflected in the model itself, the procedure recommended is to divide the area of the campus by the area of the city and multiply the resulting fraction by the real estate taxes collected by the municipality -- deducting any taxes already being paid by the institution. The authors also said that "an alternative assumption would be that the college land might be developed in a fashion similar to that of properties contiguous to it. Of course, those properties have been influenced by the presence of the college." Model G-4, however, does not provide for the application of the alternative method.

We feel that it is safe to conclude, after our Pitt study, that no single procedure will meet all cases. In some instances, the model's rules would be quite useful, in others not. In the Pitt study, we used three different approaches and reached three vastly different results:

> The relative area basis: here we applied the formula suggested in model G-4, with a modification. We did not subtract the taxes paid by the University to the city. In this case, these are true business taxes on operations of the university that have only an indirect connection with its teaching role the book store, apartment residences, etc. In an institution where the school itself was paying taxes on academic properties, or on some of them, it would be proper to deduct these sums as outlined in the Caffrey-Isaacs methodology.
>
> Even on this relatively simple formula, however, one or two precautions have to be taken. These concern the definitions of campus acreage and city acreage. They have to be on the same basis: net of streets and exclusive of tax-exempt properties. Otherwise the "tax-paying obligation" of the land outside the campus is not accurately defined. We went through some nonsense answers to calculations before discovering this in Pittsburgh, where 30% of the gross non-street acreage of the city is tax-

[1] William A. Strang, The University and the Local Economy, Wisconsin Economy Studies Number 4, Graduate School of Business, University of Wisconsin, Madison, September 10, 1971, See, for example, p.46.

Student Local Expenditures by Industry

Industry		Estimated Expenditures
Construction (repairs only)		$ 243,000
Utilities		
Telephone	$ 2,934,000	
Heating (including oil and some electricity)	732,000	
Other	840,000	4,506,000
Personal and Business Services		3,022,000
Finance, Insurance, and Real Estate		
Mortgage Interest	$ 88,000	
Rent	21,886,000	
Financial Fees and Interest	966,000	
Insurance	2,025,000	24,965,000
General Merchandise Stores		4,998,000
Food Stores		13,532,000
Automobile Sales and Service		
Sales	$ 4,357,000	
Service	4,043,000	8,400,000
Apparel Stores		4,201,000
Furniture and Appliance Stores		583,000
Eating and Drinking Places		5,570,000
Other Retail		5,652,000
Lodging Places		
Board	$ 1,321,000	
Hotels, Motels	102,000	1,423,000
Amusement Places		2,511,000
TOTAL EXPENDITURES TO LOCAL BUSINESS		$79,606,000
Local Government		
Property Taxes	$ 149,000	
Misc. Payments	830,000	979,000
Local Charitable Organizations		952,000
Local Households		945,000
TOTAL LOCAL EXPENDITURES		$82,482,000

6. Competing Businesses Operated by the University Demand More Technical Analysis Than in the Models

In the Caffrey-Isaacs methodology, the authors draw attention to the existence of any college-owned enterprises that might represent a potential market to local businessmen if they did not exist under college auspices (p.18). They are careful to point out that they are not hypothesizing on what businesses would have sprung up had it not been for the presence of the college.

In thinking about this question, and how to relate it to the implementation study at Pitt, we decided to ignore, for the most part, the negative implications of University-operated businesses such as the book stores, the car pool, and the print shop. We did this for a number of reasons:

- Unless one assumes there is virtue in private enterprise and evil in a university doing the same kind of business, then the question of impact narrows down to the distribution of the income received from the customers. Is the impact of this money "local", or is it not?

- If one ignores the ideological issue, then the difference between the university-owned business and another one is simply a matter of who gets the profits, if any. Beneath this, however, there is a deeper social question. If an inefficient university business breaks even where a private one would have made money, how much distortion does there occur in the aggregate real income of the community? This is not an easy question to answer, and we ignored it, for a lack of both conceptual scheme and data.

- Another reason for ignoring the social issue is that in the case of the University of Pittsburgh it is not very big in aggregate economic terms. The loss of imaginary profits to a non-existent business on the scale of the university's small enterprises does not bulk large in the kind of broad-brush economic impact study we were doing in Pittsburgh.

- It would appear that the main incentive for a university to go into business is to economize on the supply of goods and services to faculty and students. We are not here talking about endowment investments, which are something else again. Whether an institution saves much money in the long run by these ventures is open to question, and it is not a question within

our terms of reference. Two results could flow from the introduction of businesses to the university sphere: lower factor costs or the de facto distribution of what would otherwise be profit into better service or lower prices for the institutional users. In our view, the differences are too small to merit the kind of attention that other aspects of institutional activity should have.

7. Models Dealing With the Value of Business Property and Inventories Could Well be Deleted

We have already discussed the technicalities of defining "local business" in the Caffrey-Isaacs models. It seems to us that in terms of the Pitt study at least, analyses that bring in the value of "business property" tied to college or university-related expenditures are going too far. The labyrinths of the local economy at this depth are probably not worth exploring.

In our view, subject to further investigation, models B-2, B-2.1, B-2.2, B-2.3 could reasonably be put into a state of temporary suspension. Although valid a priori, these models are not nearly as important (especially in well-developed urban areas) as some other elements that might enrich the analysis. The principal example is the way in which institutions and people dispose of their savings as distinct from their expenditures.

8. The Community's Costs of Educating College-Related Children Need Further Analysis and Theory to Guide Impact Research

In the Pitt study, we did not have time and theory available to cope with the complexities of this issue, involved as we were with the city, county, rest of state and regions outside Pennsylvania. There are just too many data sources to tap. We did, however, make some comments on the apparent size of the population of university-related children in relation to those in city public schools, giving a limited perspective on the situation. This is a worthwhile subject to pursue, and needs to be broken down into categories of children and definitions of educational-financial jurisdictions.

9. More Elaborate Multipliers Needed on Banking

The Caffrey-Isaacs multipliers on local financial implications of bank accounts by college people are all right as far as they go -- to the first round of expenditures. The reserve banking system and banks linked by deposit-loan transactions combine to produce much larger ultimate sums of money available to the community. The assumption is that the original deposits are autonomous cash injections that would not

otherwise have taken place had the university not been in existence. That is a reasonable hypothesis in terms of the concepts of the study. But broader interpretation of next-round effects should be pondered before adoption, as they may be illogical in terms of monetary theory.

10. Owned Housing as Well as Rented Housing Needs To be Considered in College Persons' Expenditures

A person owning his own home and paying on his mortgage is no different in principle from a tenant paying rent to a landlord who passes on part of the rent to tax authorities, maintenance people, etc.

In our view, on reflection from the Pitt implementation experiment, provision should be made for recording the expenditures of homeowners as well as renters, in models such as B-1.1.2 and B-1.1.2.1 (Caffrey-Isaacs report, p.12). These should include taxes, and also the opportunity value of capital already invested in paid-for premises. More theoretical analysis needs to be done on this aspect of impact studies. In the Pitt study, we included payments by people who owned their own homes, but did not consider the implications of those whose homes were fully paid for as distinct from mortgaged. Although the evidence is not clear, it would appear that only a small proportion of Pitt people own their homes free and clear.

11. More Attention is Needed to the Whole Question of the Expenditures of People Visiting the Institution

On the Pitt project, a concerted effort was made, with the help of University-Urban Interface Program research personnel, to trace the economic impact of visitors to the campus. Comparison with studies in other institutions, such as the University of Wisconsin[1], suggests that the Pitt estimates may be 50 per cent or more under the mark. It is a tough job to visualize all the visitor categories and then figure out how to measure the dollars spent during a year in each. No central records are kept of university visitors. This, in fact, might be a good program to launch in terms of measuring the university's magnetism -- both cultural and economic. If all visitor data were fed into a computer and programmed for routine analysis, a good deal of useful information would accrue. It would not be necessary to ask people how much money they spent -- just where they came from, why they came, and how long they would be in town.

The visitors to a major university spend millions of dollars per year in the local economy. The figures run from $2 million to probably $20 million, depending on the size of the school, its location, various attractions, and so on. This is a subject that deserves much more analysis, and for reasons other than those underlying economic impact studies.

[1] William A. Strang, The University and the Local Economy, pp.48-57

Attached is a copy of Prof. Strang's Wisconsin questionnaire for visiting athletic fans. It may be useful as a guide or starting point for visitors questionnaire design. The accompanying selected tables form the visitor analyses of his report -- well done in our view -- will give readers further information on his research categories.

12. The Ultimate Challenge is to Measure the Cultural Impact of the University or College

As pointed out in the last chapter of our report itself, many of the most important aspects of the institution of higher learning lie beyond the horizons of economics. The challenge is to find out these psychic phenomena influence the quality of life in the university-oriented community. Many different aspects could be studied -- educational services, public events, community services, business and professional services, and beyond these the subtle influences of the aura of the university presence. It may turn people on or off, but it is not likely to be neutral for many of the citizenry. As such the broader aspects of the effects -- the hidden effects -- of the institution call for new analytical theories.

E. SELECTED FORMS AND SURVEY ADMINISTRATION AIDS

As can be readily understood, an economic impact study generates substantial amounts of data from many sources. These data have to be identified first as to source, then collected, filed, analyzed, and reported on. As an aid to persons who are faced with this task, we have included in this Methodological Appendix a set of suggested forms and file descriptions. These ought not to be considered definitive, merely indicative. They will doubtless be modified by any user.

The items included below are as follows:

Economic Impact Study Variable. This form enables the user of the Caffrey-Isaacs models to segregate each variable, indicate its linkages to the proposed analysis, and record where it is to be found (inside or outside the subject institution).

Day-at-a-GLANCE Diary Page. For administration, the principal investigator needs a daily book for scheduling his myriad tasks, entering appointments, and so on. We have tried all the diaries on the market and believe this is the most suitable.

Contact List. College or university directories are of limited value on projects such as the one being described here. They are useful for identifying the names, addresses and phone numbers of people to be interviewed or otherwise contacted. But the researcher needs a list he can consult handily, of the people he has already identified or contacted. The name of any secretary or assistant should also be included.

Project 474
May, 1971

University Extension
The University of Wisconsin
Survey Research Laboratory

Athletic Fan Questionnaire

1. Did you visit The University of Wisconsin, Madison campus, to view a football, basketball, or hockey game in 1970?

   _____ Yes _____ No (PLEASE RETURN THE QUESTIONNAIRE IN THE ENVELOPE WHICH WAS PROVIDED.)

2. Do you have any children currently attending The University of Wisconsin at Madison?

   _____ Yes _____ No

3. Please indicate the number of visits that you made during the latest football, basketball, and hockey season and describe them as indicated below.

   A. I made a total of _____ visits during the period of September 1970 to April 1971.

   B. Beginning with your most recent visit and working backward, please indicate below the length of each visit and the number of visitors involved in each visit.

Visit #	Number of Days	Number of Nights	Number of Visitors

C. Please select at random one of the visits made where your primary reason for coming was to view an athletic event and circle its number in the visit colume. (This does not apply if you made only one visit during the period of September 1970 to April 1971.)

4. With reference to the visit you selected at random in Question 3, please estimate the amount of expenditure that you made to each of the following types of businesses located in Dane County. We recognize that this may be difficult for you to remember, but your best estimate will be useful.

Type of Dane County Business or Organization	Estimated Expenditure
(a) The University of Wisconsin (athletic tickets, on-campus meals, expenditures in the Memorial Union, etc.)	$_____
(b) Transportation companies located in Dane County (city or University buses, railroad or airline companies--only if ticket was purchased locally--other bus companies, taxis)	_____
(c) Personal or business services (lawyers, doctors, barbers, beauty shops, optometrists, laundries, dry cleaners, etc.)	_____
(d) Department, variety, discount, or catalog stores . .	_____
(e) Apparel stores (clothing, shoes, accessories)	_____
(f) Automobile dealers (car purchases only)	_____
(g) Service stations, garages, auto dealers (for repairs, parts, or gasoline, etc.).	_____
(h) Furniture and/or appliance stores	_____
(i) Eating and drinking places.	_____
(j) Other retail stores (florists, gift stores, drug stores, hardware stores, etc.)	_____
(k) Lodging places (hotels, motels, tourist homes) . . .	_____
(l) Amusement places (theaters, private golf clubs, amusement parks, etc.)	_____
(m) City or county government (parking fees, traffic tickets, public golf courses, public park fees, etc.)	_____
(n) Local households (payments made directly to individuals not in business, for example, babysitters).	_____
TOTAL VISIT EXPENDITURES	$_____

Calculation of Parent Visits

Students With Parents (fall 1969 enrollment)		35,549
Less:	Dane County Students	9,000
		26,549
Less:	Foreign Students (parents unlikely to visit)	1,780
		24,769
Plus:	Nonresident Graduate Students With Dane County Addresses (parents could visit)	1,700
		26,469
Less:	An Estimate of 3 Percent of Students With Same Parents (brothers, sisters)	794
Equals:	POTENTIAL PARENT VISITOR PARTIES	25,675
Multiplied by:	50.3 Percent of Parents Making Visits (determined from survey)	x.503
		12,907
Multiplied by:	Average of 4.68 Visits (determined from survey)	x4.68
Equals:	PARENT VISITOR PARTIES	60,403

Expenditures by Parent Visitors

Industry	Estimated Expenditures
Transportation	$ 154,000
Personal and Business Services	1,107,000
General Merchandise Stores	872,000
Apparel Stores	948,000
Automobile Sales and Service	1,054,000
Furniture and Appliance Stores	12,000
Eating and Drinking Places	213,000
Other Retail Stores	743,000
Lodging Places	1,372,000
Amusement Places	374,000
TOTAL EXPENDITURES TO LOCAL BUSINESS	$ 6,822,000
Local Government	42,000
Local Households	34,000
TOTAL EXPENDITURES TO LOCAL ECONOMY	$ 6,898,000

Estimated Number of Other Visitors

Type of Visitor	Number	Mean Days/Visit	Visit Days
High School Students	761	1	761
Transfer Students	4,600	1	4,600
Counselor Training Sessions	106	1	106
Memorial Union Visitors	2,000	1	2,000
Placement Interviewers	1,578	**	2,793
CUNA School	185	13	2,405
Bank Administration Institute	780	13	10,140
Graduate School of Banking	1,407	13	18,291
Law School Visitors	100	4.5	450
Salesmen	500	1.5	750
Wisconsin Center Conferences	11,028	**	20,300
Extension Conferences	19,652	**	52,849
Visiting Athletes*	2,000	2	4,000
Lecturers, Interviewees*	2,000	1.5	3,000
Total Visitor Days			122,085

*Our estimate (other figures were obtained from the most authoratative sources available).

**Mean days per visit not included because total visit days were available.

Expenditures by All Visitors

Industry	Estimated Expenditures
Transportation	$ 352,000
Personal and Business Services	1,427,000
General Merchandise Stores	1,281,000
Automobile Sales and Service	1,627,000
Apparel Stores	1,[illegible]58,000
Furniture and Appliance Stores	17,000
Eating and Drinking Places	2,572,000
Other Retail Stores	912,000
Lodging Places	3,059,000
Amusement Places	550,000
TOTAL EXPENDITURES TO LOCAL BUSINESS	$13,355,000
Local Government	143,000
Local Households	63,000
TOTAL EXPENDITURES TO LOCAL ECONOMY	$13,561,000

*Total expenditures to the University for services were $1,707,000.

ECONOMIC IMPACT STUDY VARIABLE

VARIABLE _____

DESCRIPTION _____

_____

_____

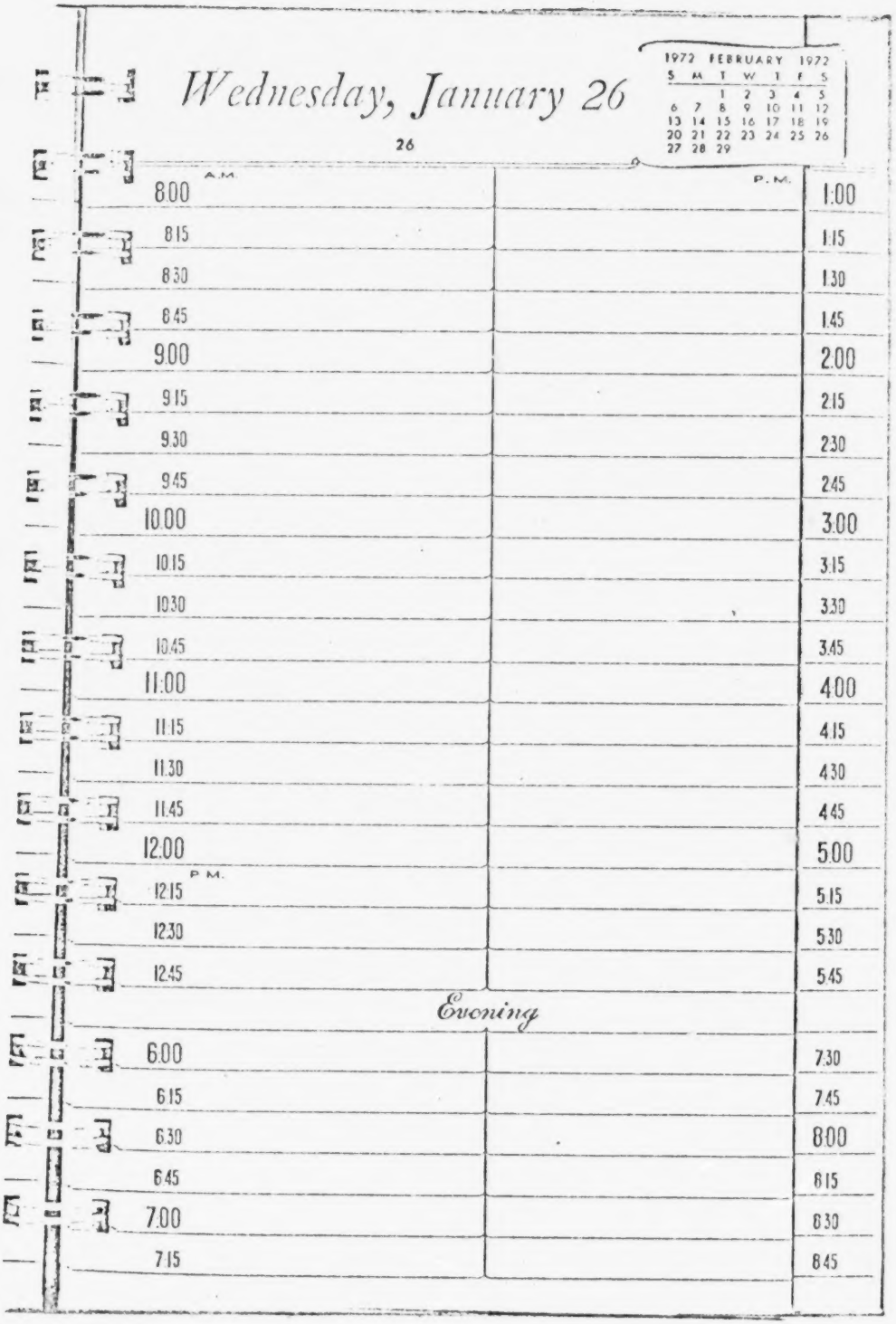
_____

SOURCE _____

CAFFREY-ISAACS _____

PAGE REF. _____

EQUATION NUMBER	MODEL NAME



Eaton's DAY-AT-A-GLANCE # 800

ECONOMIC IMPACT STUDY DIARY Date: Page:

PROJECT FILES USED IN PITTSBURGH STUDY

Name of File	Contents
Correspondence	Contract, terms of reference, notes on meetings of project committees, letters, interim reports
History	Background notes, pamphlets, and illustrations dealing with the history of the University
Human Capital	Data on graduates, occupational information, place of residence, sex, research data on income differentials, working papers
Financial Data	Most recent financial statements (for the study year); notes on interviews with Comptroller and staff, special tabulations from his office; notes on adjustments for regional campuses
Physical Development	Notes and tabulations on the historical construction costs of the University, its various acquisitions of land and buildings; taxation and assessment data on the property; public data on assessment, taxes, population trends in various parts of the city; inflation factors on building costs
Purchases	Records, sample of transactions, calculations, worksheets, on the amount and objects of University purchasing during study year
University Businesses	Data on business-type activities of the University (book store, car pool, print shop, etc.)
Faculty/Staff Data	Number and income distribution of faculty and staff, survey forms, testing notes, survey results and computations including computer runs
Student Data	Number and type of students, survey forms, testing notes, survey results and computations including computer runs
Visitors	No. and type of visitors in study year; calculations and bases thereof, for expenditures in that period

Community Data	Interviews and statistics from the local economic community; banking regulations and local cash flows in borrowing and lending; retail sales data; business statistics; multiplier calculations
Local Institutions	Basic statistics on the size and budgets of local colleges and universities other than the main subject (Pittsburgh)
UUIP Reports	Reports and other documents from the University-Urban Interface Program at Pitt
Other Studies	Draft and final reports on other studies; the Fink-Cooke bibliography; sociological reports where relevant
Data Element Sheets	Original file for data element sheets during period when sources were being identified in relation to model variables
General Documents	Reports and general orientation material for study background; includes speeches and articles by Pitt faculty and staff; old annual reports; clippings and magazine articles on the subject or related to costs and benefits of education
Drafts of Report	Last two drafts of report, section by section and when complete; samples of illustrations, if any, to be used
Drafts of Appendices	Collection and organization of material for technical or statistical appendices to the main report
Editorial File	Comments and criticisms of report drafts, following use in corrections on "master copy" of drafts of main report and appendices -- e.g. from members of the internal or external advisory committee

* * *

In addition, a collection of books, maps, a suitcase for documents

CAFFREY-ISAACS MODEL & VALUES FOR THE UNIVERSITY OF PITTSBURGH, 1970

Model	Definition and Values
B-1	College related local[1] business volume
BV_{CR}	= 80.6 m + 16.1 m + 80.6 m
	= $177.3 million
B-1.1	College related local expenditures
$(EL)_{CR}$	= 30.0 m + 40.0 m + 9.7 m (minus residence meals = 8.6) + 2.0
	= $80.6 million
B-1.1.1	Local expenditure by college (ex construction)
$(EL)_{C}$	= 0.61 (123.7 m - 73.7 m - 0 - 0.295)
	= $30 million
B-1.1.2	Local expenditure by faculty and staff
$(EL)_{F}$	= 11.2 m + 28.4 m + 0
	= $40 million
B-1.1.2.1	Expenditure by faculty and staff for local rental or owned housing
$(E_H)_F$	= 0.956 (0.98) (48.0 m) (0.194)
	= $11.2 million
B-1.1.2.2	Local nonhousing expenditure by local faculty and staff
$(E_{NH})_F$	= 0.956 (0.95) (48.0 m) (0.65)
	= $28.4 million

1 "Local" connotes City of Pittsburgh and Allegheny County; the study also incorporated "state" and "out-of-state" impacts but these are less amenable to investigation via the Caffrey-Isaacs Models.

B-1.1.2.3 Local expenditure by nonlocal faculty and staff

$(EL)_{NLF}$ N/A

Assumed Zero

B-1.1.3 Local expenditures by students (city & county)

$(E_L)_S$ = 2.2 m + 2.0 m + 3.2 m + 0 + 2.3 m

= $9.7 million (portion processed by University counted as non-student)

B-1.1.3.1 Local expenditures by students in dorms, etc. or at home, excluding room and board (city & county)

$(E_m)_s$ = (4400 + 3700) (400) (0.73)

+ $2.2 million

B-1.1.3.2 Expenditures by students for local rental housing

$(E_H)_S$ = (7000) (290)

= $2.0 million

B-1.1.3.3 Local nonhousing expenditures by students who rent local housing

$(E_{NH})_S$ = (7000) (650) (0.70)

= $3.2 million

B-1.1.3.4 Local expenditures by nonlocal students

$(EL)_{NLS}$ negligible

= 0

B-1.1.3.5 Local expenditures by dorms and other local living groups (dorms only) (calculated on a university expenditure)

$(E_{LG})_S$ = (3700) (av. residence fee $635)

= $2.3 million

B-1.1.4 $(E_L)_V$ — Local expenditures by visitors to the college

Visitor days (see Ch.XII of report)

Spectators	66,750
Parents	23,000
Business	18,000
Education	7,000
	114,750 per year

@ $28 per day = $3,175,000

B-1.2 $(P_{LB})_{CR}$ — Purchases from local sources by local business in support of local business volume

= 0.20 (80.6 m)

= $16.1 million

B-1.3 $(BV_I)_{CR}$ — Local business volume generated by expenditure of college related income other than that of faculty, staff and students.

= 1.0 (80.6 m)

= $80.6 million

B-2 — Value of business property committed to college related business. Also B-2.1, 2.2, and 2.3

N/A because of lack of local records.

B-3 — Expansion of local banks' credit base resulting from college-related deposits (many students have no bank accounts)

= (0.95)[(N/A) + (800) (5500) + (100) (15100)]
+ (0.825) [(2.0 m) + (500) (5500) + (100) (15100)]
+ (0.0125) (80.6 m)

= 0.95 (6.9 m) = $6.6 million +
0.825 (6.3 m) = $5.2 million +
0.0125 (80.6 m) = $1.0 million +

$12.8 million (includes 2.0 million

B.4
$(BV_U)_C$

Local business volume unrealized because of the existence of college enterprises.

N/A. It applies only to indeterminable shadow profits foregone by local business. Otherwise, all factor purchases have some local effect as if made by local businessmen instead of college officials.

G-1
R_{CR}

College-related revenue received by local governments

G-1.1
$(R_{RE})_{CR}$

College-related real estate taxes paid local governments.

N/A See G-1.1.1

G-1.1.1
$(R_{RE})_C$

Real estate taxes paid to local government by the college

= $170,000

G-1.1.2
$(R_{RE})_F$

Real estate taxes paid to local governments by local faculty and staff

N/A because of lack of appropriate municipal records on residential assessment. Calculation in text made directly from faculty/staff sample.

= $3.2 million

G-1.1.3
$(R_{RE})_S$

Real estate taxes paid to local governments by local fraternities, sororities, and other student living groups.

N/A because of (1) lack of data (2) confining of this student category to dorm students living on campus. Others would be in off-campus housing where the landlord pays the taxes, for the most part.

G-1.1.4
$(R_{RE,B})_{CR}$

Real estate taxes paid local governments by local businessmen for real property, allocable to college-related business.

N/A because of lack of local records on business vs. residential assessment. (In terms of retail sales, this figure would be 1 per cent of Allegheny County and City of Pittsburgh collections, plus allowance for a further 1 per cent from the university's own purchases.)

G-1.2
$(R_{NRE})_{CR}$

College-related property taxes, other than real-estate, paid to local governments.

N/A because either not applicable in the Pittsburgh situation or data not available.

G-1.2.1

Nonreal-property taxes paid to local governments by local faculty and staff.

N/A because calculated directly from Surveys. Note also that total number of "households" is not the same concept as total "number" of local faculty and staff.

G-1.2.2

Non-real property taxes paid local governments by local fraternities, sororities and other student living groups.

N/A. No records. Probably zero. Pittsburgh universe consists of dorm students (on campus).

G-1.2.3

Inventory and other nonreal property taxes paid to local governments by local businesses for assets allocable to college-related business.

N/A because asset figures not available.

G-1.3 Sales tax received by local governments as a result of college-related local purchases.

N/A in Pittsburg situation.

G-1.4 State aid to local governments allowable to the presence of the college. Also G-1.4.1

N/A because of lack of data, especially in Allegheny County centers outside City of Pittsburgh.

G-1.5 $(R_Q)_{CR}$ Other college-related revenues calculated by local governments ($,000)

	Total	University	Faculty/ Staff	Students
Auto Registration	N/A	(applies only to state revenues)		
Utility Charges	2367	2178	189	N/A
Fees for Licences and Permits	-	N/A	N/A	N/A
Assessment Charges	-	-	-	-
Other	600	-	600*	-
	2967	2178	789	-

* Not clear what this is. May include some state income tax as well as personal property tax, etc. Should be discounted by an indeterminable amount.

G-2 Operating cost of local government-provided municipal and public school services allowable to college-related influence. Also G-2.1, G-2.2

N/A for lack of local data.

G-3

Value of local governments properties allocable to college-related portion of services provided.

N/A in terms of data for all study areas on comparable basis - city, county, state.

G-4

$(RF_{RE})_C$

Real estate taxes foregone through the tax-exempt states of the college.

Note: tax payments by the college should not be deducted if paid for "business" properties owned and operated by the university (as in model).

$= 46.0 \text{ m} \frac{(125)}{19106}$

$= 46.0 \text{ m} \times 0.0065$

= $299,000

Also, this method depends on realism of an assumption that campus assessment per acre equals the average for the whole taxing jurisdiction.

G-5

$(OC_M)_{SC}$

Value of municipal-type services self-provided by the college (City of Pittsburgh).

Police and security	$750,000
Sanitation	50,000
Street lighting	-
Street maintenance	800
Other	-
Total	$800,800

I-1

J_L

Number of local jobs attributable to the preserve of the college

= 5500 + 0.00007 (80.6 m + N/A)
(excludes college-related government expenditures from model G-2; also excludes multiplier effect.)

= 5500 + 5642

= 11142 (including university itself)

With multiplier of 2.0 on outside jobs.

= 5500 + 12284

= 17784

I-2

PI_{CR}

Personal income of local individuals from college-related jobs and business activities

= 0.956 (62.0 m) + 0.15 (80.6 m)

= $71.4 million (1st round of expenditure-income cycle, only)

Note: 0.15 based on research of retail establishments only, since "business" have been defined as this

I-3

DG_{CR}

Durable goods procured with income from college-related jobs and business activities.

= 0.08 (62.0 m)

= $5.0 million

G. DEFINITIONS OF THE MODELS EXTRACTED FROM THE CAFFREY-ISAACS REPORT

Model B-1

BV_{CR}

College-Related Local Business Volume

$$BV_{CR} = (E_L)_{CR} + (P_{LB})_{CR} + (BV_I)_{CR}$$

$(E_L)_{CR}$ = college-related local expenditures (model B-1.1)

$(P_{LB})_{CR}$ = purchases from local sources by local businesses in support of their college-related business volume (model B-1.2)

$(BV_I)_{CR}$ = local business volume stimulated by the expenditure of college-related income by local individuals other than faculty, staff, or students (model B-1.3)

Model B-1.1

$(E_L)_{CR}$

College-Related Local Expenditures

$$(E_L)_{CR} = (E_L)_C + (E_L)_F + (E_L)_S + (E_L)_V$$

$(E_L)_C$ = local expenditures by the college (model B-1.1.1)

$(E_L)_F$ = local expenditures by faculty and staff (model B-1.1.2)

$(E_L)_S$ = local expenditures by students (model B-1.1.3)

$(E_L)_V$ = local expenditures by visitors to the college (model B-1.1.4)

Model B-1.1.1

$(E_L)_C$

Local Expenditures by the College

$$(E_L)_C = (e_L)_C (E_C - W_{F,S} - XF_C - R_C)$$

$(e_L)_C$ = proportion of total college expenditures that are local, excluding compensation, internal items, and taxes

E_C = total college expenditures

$W_{F,S}$ = gross compensation to faculty, staff, and students

XF_C = internal account transfers and payments

R_C = taxes and other payments to governments

Model B-1.1.2

$(E_L)_F$

Local Expenditures by Faculty and Staff

$$(E_L)_F = (E_H)_F + (E_{NH})_F + (E_L)_{NLF}$$

$(E_H)_F$ = expenditures by faculty and staff for local rental housing (model B-1.1.2.1)

$(E_{NH})_F$ = local nonhousing expenditures by local faculty and staff (model B-1.1.2.2)

$(E_L)_{NLF}$ = local expenditures by nonlocal faculty and staff (model B-1.1.2.3)

Model B-1.1.2.1

$(E_H)_F$

Expenditures by Faculty and Staff for Local Rental Housing

$$(E_H)_F = (f_L)\ (f_H)\ (DI_F)\ (e_H)$$

f_L = proportion of faculty and staff residing locally

f_H = proportion of local faculty and staff who rent housing

DI_F = total disposable income of faculty and staff

e_H = proportion of a tenant's total expenditures likely to be spent for rental housing

Model B-1.1.2.2

$(E_{NH})_F$

Local Nonhousing Expenditures by Local Faculty and Staff

$$(E_{NH})_F = (f_L)\ (e_L)\ (DI_F)\ (e_{NH})_F$$

f_L = proportion of faculty and staff residing locally

e_L = proportion of total nonhousing expenditures that an individual is likely to make in his local environment (see appendix C)

DI_F = total disposable income of faculty and staff

$(e_{NH})_F$ = proportion of a consumer's total expenditures spent on nonhousing items

Model B-1.1.2.3

$(E_L)_{NLF}$

Local Expenditures by Nonlocal Faculty and Staff

$$(E_L)_{NLF} = (1-f_L)\ (F)\ (E_I)_F$$

f_L = proportion of faculty and staff residing locally

F = total number of faculty and staff

$(E_I)_F$ = estimated average local expenditures by each nonlocal faculty and staff person

Model B-1.1.3

$(E_L)_S$

Local Expenditures by Students

$$(E_L)_S = (E_M)_S + (E_H)_S + (E_{NH})_S + (E_L)_{NLS} + (E_{LG})_S$$

$(E_M)_S$ = local miscellaneous expenditures by students obtaining local room and board from dormitories, fraternities, sororities, other groups, or parents (model B-1.1.3.1)

$(E_H)_S$ = expenditures by students for local rental housing (model B-1.1.3.2)

$(E_{NH})_S$ = local nonhousing expenditures by students who rent local housing (model B-1.1.3.3)

$(E_L)_{NLS}$ = local expenditures by nonlocal students (model B-1.1.3.4)

$(E_{LG})_S$ = local expenditures by local fraternities, sororities, and other student living groups (model B-1.1.3.5)

Model B-1.1.3.1

$(E_{\ell,l})_S$

Local Miscellaneous Expenditures, Exclusive of Room and Board, by Students Obtaining Local Room and Board in Group Arrangements or with Parents

$$(E_{\ell,l})_S = (S_L)\,(E_m)_S\,(e_L)$$

S_L = number of students obtaining local room and board from dormitories, fraternities, sororities, other groups, or parents

$(E_m)_S$ = average miscellaneous expenditures, exclusive of room and board, per student of this type

e_L = proportion of total expenditures, exclusive of room and board, that a student is likely to make in his local environment (see appendix C)

Model B-1.1.3.2

$(E_H)_S$

Expenditures by Students for Local Rental Housing

$$(E_H)_S = (S_H)\,(E_h)_S$$

S_H = number of students renting local housing

$(E_h)_S$ = average rental housing expenditures per student

Model B-1.1.3.3

$(E_{NH})_S$

Local Nonhousing Expenditures by Students Who Rent Local Housing

$$(E_{NH})_S = (S_H)\,(E_{nh})_S\,(e_L)$$

S_H = number of students renting local housing

$(E_{nh})_S$ = average nonhousing expenditures per student

e_L = proportion of total nonhousing expenditures that a student is likely to make in his local environment (see appendix C)

Model B-1.1.3.4

$(E_L)_{NLS}$

Local Expenditures by Nonlocal Students

$$(E_L)_{NLS} = (S_{NL})\ (E_I)_S$$

S_{NL} = number of nonlocal students

$(E_I)_S$ = estimated average local expenditures by each nonlocal student

Model B-1.1.3.5

$(E_{LG})_S$

Local Expenditures by Local Fraternities, Sororities, and Other Student Living Groups

$$(E_{LG})_S = (E_{LGH})_S + (e_{LGNH})_S\ (E_{LGO})_S$$

$(E_{LGH})_S$ = expenditures by student living groups for local rental housing

$(e_{LGNH})_S$ = proportion of nonhousing expenditures made locally by local living groups

$(E_{LGO})_S$ = operating and food expenditures of local living groups

Model B-1.1.4

$(E_L)_V$

Local Expenditures by Visitors to the College

$$(E_L)_V = (V_1)(E_1)_V + (V_2)(E_2)_V + \ldots + (V_n)(E_n)_V$$

(V_n) = estimated number of visits to the college by visitors in the n^{th} category

$(E_n)_V$ = estimated local expenditures by each visitor in the n^{th} category during each visit to the college

Model B-1.2

$(P_{LB})_{CR}$

Purchases from Local Sources by Local Businesses in Support of Their College-Related Business Volume

$$(P_{LB})_{CR} = (m_p)\ (E_L)_{CR}$$

m_p = coefficient representing the degree to which local businesses purchase goods and services from local sources

$(E_L)_{CR}$ = college-related local expenditures (model B-1.1)

Model B-1.3

$(BV_I)_{CR}$

Local Business Volume Stimulated by the Expenditure of College-Related Income by Local Individuals Other Than Faculty, Staff, or Students

$$(BV_I)_{CR} = (m_i)\ (E_L)_{CR}$$

m_i = coefficient representing the degree to which individual income received from local business activity is spent and respent locally

$(E_L)_{CR}$ = college-related local expenditures (model B-1.1)

Model B-2.3

$(OP_B)_{CR}$

Value of Local Business Property, Other Than Real Property and Inventory, Committed to College-Related Business

$$(OP_B)_{CR} = \frac{\frac{OP_1}{BV_1} + \frac{OP_2}{BV_2} + \ldots + \frac{OP_n}{BV_n}}{n} \quad \frac{BV_{CR}}{BV_L}$$

OP_n = value of local business property, other than real property and inventory, of the n^{th} enterprise

BV_n = business volume of the n^{th} enterprise

BV_{CR} = college-related local business volume (model B-1)

BV_L = local business volume (model B-2.1)

Model B-3

CB

Expansion of the Local Banks' Credit Base Resulting from College-Related Deposits

$$CB = (1-t)\ [TD_c + (TD_f)\ (F) + (TD_s)\ (S)]$$

$$+ (1-d)\ [DD_c + (DD_f)\ (F) + (DD_s)\ (S) + (cbv)\ (BV_{CR})]$$

t = local time-deposit reserve requirement

TD_c = average time deposit of the college in local banks

TD_f = average time deposit of each faculty and staff person in local banks

F = total number of faculty and staff

TD_s = average time deposit of each student in local banks

S = total number of students

d = local demand-deposit reserve requirement

DD_c = average demand deposit of the college in local banks

DD_f = average demand deposit of each faculty and staff person in local banks

DD_s = average demand deposit of each student in local banks

cbv = cash-to-business-volume ratio

BV_{CR} = college-related local business volume (model B-1)

Model B-4

$(BV_U)_C$

Local Business Volume Unrealized because of the Existence of College Enterprises

$$(BV_U)_C = (I_{BV})_C$$

$(I_{BV})_C$ = income received by the college from the operation of local and on-campus college-owned business enterprises

Model G-1

R_{CR}

College-Related Revenues Received by Local Governments

$R_{CR} = (R_{RE})_{CR} + (R_{NRE})_{CR} + (R_{ST})_{CR} + (R_A)_{CR} + (R_O)_{CR}$

$(R_{RE})_{CR}$ = college-related real-estate taxes paid to local governments (model G-1.1)

$(R_{NRE})_{CR}$ = college-related property taxes, other than real-estate, paid to local governments (model G-1.2)

$(R_{ST})_{CR}$ = sales tax revenue received by local governments as a result of college-related local purchases (model G-1.3)

$(R_A)_{CR}$ = state aid to local governments allocable to the presence of the college (model G-1.4)

$(R_O)_{CR}$ = other college-related revenues collected by local governments (model G-1.5)

Model G-1.1

$(R_{RE})_{CR}$

College-Related Real-Estate Taxes Paid Local Governments

$(R_{RE})_{CR} = (R_{RE})_C + (R_{RE})_F + (R_{RE})_S + (R_{RE,B})_{CR}$

$(R_{RE})_C$ = real-estate taxes paid to local governments by the college (model G-1.1.1)

$(R_{RE})_F$ = real-estate taxes paid to local governments by local faculty and staff (model G-1.1.2)

$(R_{RE})_S$ = real-estate taxes paid to local governments by local fraternities, sororities, and other student living groups (model G-1.1.3)

$(R_{RE,B})_{CR}$ = real-estate taxes paid to local governments by local businesses for real property allocable to college-related business (model G-1.1.4)

Model G-1.1.1

$(R_{RE})_C$

Real-Estate Taxes Paid to Local Governments by the College

Obtain from college records

Model G 1.1.2

$(R_{RE})_F$

Real-Estate Taxes Paid to Local Governments by Local Faculty and Staff

$$(R_{RE})_F = \left[(F_L)(1-f_H)\right]\left[pt\ \frac{V_{PR}}{N_{PR}}\right]$$

F_L = number of faculty and staff residing locally

f_H = proportion of local faculty and staff who rent housing (see model B-1.1.2.1)

pt = local property tax rate

V_{PR} = total assessed valuation of all local private residences

N_{PR} = total number of local private residences

Model G-1.1.3

$(R_{RE})_S$

Real-Estate Taxes Paid to Local Governments by Local Fraternities, Sororities, and Other Student Living Groups

$$(R_{RE})_S = (R_{RE})_{S1} + (R_{RE})_{S2} + \ldots + (R_{RE})_{Sn}$$

$(R_{RE})_{Sn}$ = real-estate taxes paid to local governments by local student living groups in the n^{th} category

Model G-1.1.4

$(R_{RE,B})_{CR}$

Real-Estate Taxes Paid Local Governments by Local Businesses for Real Property Allocable to College-Related Business

$$(R_{RE,B})_{CR} = (pt)\left(\frac{BV_{CR}}{BV_L}\ V_B\right)$$

pt = local property tax rate (see model G-1.1.2)

BV_{CR} = college-related local business volume (model B-1)

BV_L = local business volume (see model B-2.1)

V_B = assessed valuation of local business real property (see model B-2.1)

Model G-1.2

$(R_{NRE})_{CR}$

College-Related Property Taxes, Other Than Real-Estate, Paid to Local Governments

$$(R_{NRE})_{CR} = (R_{NRE})_C + (R_{NRE})_F + (R_{NRE})_S + (R_{NRE,B})_{CR}$$

$(R_{NRE})_C$ = inventory and other nonreal-property taxes paid to local governments by the college (obtain from college records)

$(R_{NRE})_F$ = nonreal-property taxes paid to local governments by local faculty and staff (model G-1.2.1)

$(R_{NRE})_S$ = nonreal-property taxes paid to local government by local fraternities, sororities, and other student living groups (model G-1.2.2)

$(R_{NRE,B})_{CR}$ = inventory and other nonreal-property taxes paid to local governments by local businesses for assets allocable to college-related business (model G-1.2.3)

Model G-1.2.1

$(R_{NRE})_F$

Nonreal-Property Taxes Paid to Local Governments by Local Faculty and Staff

$$(R_{NRE})_F = F_L \frac{R_{OP}}{T_C}$$

F_L = number of faculty and staff residing locally (see model G-1.1.2)

R_{OP} = total property taxes for other than real estate or inventories paid to local governments

T_C = total number of local households

Model G-1.2.2

$(R_{NRE})_S$

Nonreal-Property Taxes Paid Local Governments by Local Fraternities, Sororities, and Other Student Living Groups

$$(R_{NRE})_S = (R_{NRE})_{S1} + (R_{NRE})_{S2} + \ldots + (R_{NRE})_{Sn}$$

$(R_{NRE})_{Sn}$ = nonreal-property taxes paid to local governments by the n^{th} local student living group

Model G-1.2.3

$(R_{NRE,B})_{CR}$

Inventory and Other Nonreal-Property Taxes Paid to Local Governments by Local Businesses for Assets Allocable to College-Related Business

$$(R_{NRE,B})_{CR} = (it)(I_B)_{CR} + (ot)(OP_B)_{CR}$$

it = local inventory tax rate

$(I_B)_{CR}$ = value of local business inventory committed to college-related business (same as in model B-2.2)

ot = local property tax rate for other than real estate or inventories

$(OP_B)_{CR}$ = value of local business property, other than real property and inventory, committed to college-related business (same as in model B-2.3)

Model G-1.3

$(R_{ST})_{CR}$

Sales Tax Revenue Received by Local Governments as a Result of College-Related Local Purchases

$$(R_{ST})_{CR} = (st_{LG})(ST)\left(\frac{BV_{CR}}{BV_L}\right)$$

st_{LG} = proportion of sales tax retained by local governments

ST = total sales tax collected locally

BV_{CR} = college-related local business volume

BV_L = local business volume

Model G-1.4

$(R_A)_{CR}$

State Aid to Local Governments Allocable to the Presence of the College

$$(R_A)_{CR} = (R_A)_{CH} + (R_A)_{PC}$$

$(R_A)_{CH}$ = state aid to local public schools allocable to children of college-related families (model G-1.4.1)

$(R_A)_{PC}$ = other state aid received by local governments on a per capita, service-unit, or tax-unit basis and influenced by the presence of the college, e.g., gasoline tax allocations, road maintenance subsidies (establish on the basis of local conditions)

Model G-1.4.1

$(R_A)_{CH}$

State Aid to Local Public Schools Allocable to Children of College-Related Families

$$(R_A)_{CH} = A_{PS}\frac{(CH_{PS})_F + (CH_{PS})_S}{CH_{PS}}$$

A_{PS} = total state aid to local public schools

$(CH_{PS})_F$ = number of faculty and staff children attending local public schools (see model G-2.2)

$(CH_{PS})_S$ = number of students' children attending local public schools (see model G-2.2)

CH_{PS} = total number of children attending local public schools (see model G-2.2)

Model G-1.5

$(R_O)_{CR}$

Other College-Related Revenues Collected by Local Governments

$(R_O)_{CR}$ =
1. auto registration fees from the college, faculty and staff, and students
2. user charges for utilities, sewers, sanitation, etc., paid by the college, faculty and staff, and students
3. fees for licenses and permits taken out by the college
4. assessment charges paid by the college
5. other local revenues

Model G-2

$(OC_{M,PS})_{CR}$

Operating Cost of Local Government-Provided Municipal and Public School Services Allocable to College-Related Influences

$$(OC_{M,PS})_{CR} = (OC_M)_{CR} + (OC_{PS})_{CR}$$

$(OC_M)_{CR}$ = operating cost of local government-provided municipal services allocable to college-related influences (model G-2.1)

$(OC_{PS})_{CR}$ = operating cost of local public schools allocable to college-related persons (model G-2.2)

Model G-2.1

$(OC_M)_{CR}$

Operating Cost of Government-Provided Municipal Services Allocable to College-Related Influences

$$(OC_M)_{CR} = \left(\frac{\frac{F + S}{POP_{LD}} + \frac{FH_L + SH_L}{POP_{LR}}}{2} \right) (B_M)$$

F = total number of faculty and staff (see model B-3)

S = total number of students (see model B-3)

POP_{LD} = total local daytime population

FH_L = total number of persons in local faculty and staff households

SH_L = total number of persons in local student households

POP_{LR} = total local resident population

B_M = local governments' operating budgets for all municipal services except public schools

Model G-2.2

$(OC_{PS})_{CR}$

Operating Cost of Local Public Schools Allocable to College-Related Persons

$$(OC_{PS})_{CR} = \left[\frac{(CH_{PS})_F + (CH_{PS})_S}{CH_{PS}}\right](B_{PS})$$

$(CH_{PS})_F$ = number of faculty and staff children attending local public schools (same as in model G-1.4.1)

$(CH_{PS})_S$ = number of students' children attending local public schools (same as in model G-1.4.1)

CH_{PS} = total number of children attending local public schools (same as in model G-1.4.1)

B_{PS} = local governments' operating budgets for public schools

Model G-4

$(RF_{RE})_C$

Real-Estate Taxes Foregone through the Tax-Exempt Status of the College

$$(RF_{RE})_C = [R_{RE} - (R_{RE})_C]\left(\frac{G_C}{G_L}\right) - (R_{RE})_C$$

R_{RE} = total real-estate taxes collected by local governments

$(R_{RE})_C$ = real-estate taxes paid to local governments by the college (model G-1.1.1)

G_C = geographical area of the college

G_L = geographical area of the local environment, exclusive of the college

Model G-5

$(OC_M)_{SC}$

Value of Municipal-Type Services Self-Provided by the College

Obtain operating costs from the college records

$(OC_M)_{SC}$ = 1. police and security services
2. sanitation
3. street lighting
4. street maintenance
5. other services

Model G-3

GP_{CR}

Value of Local Governments' Properties Allocable to College-Related Portion of Services Provided

$$GP_{CR} = \left[\frac{(OC_M)_{CR}}{B_M}\right]\left(GP_M\right) + \left[\frac{(OC_{PS})_{CR}}{B_{PS}}\right]\left(GP_{PS}\right)$$

$(OC_M)_{CR}$ = operating cost of government-provided municipal services allocable to college-related influences (model G-2.1)

B_M = local governments' operating budgets for all municipal services except public schools (same as in model G-2.1)

GP_M = value of all local government property except public schools

$(OC_{PS})_{CR}$ = operating cost of local public schools allocable to college-related persons (model G-2.2)

B_{PS} = local governments' operating budgets for public schools (same as in model G-2.2)

GP_{PS} = value of all local government property associated with public schools

Model I-1

J_L

Number of Local Jobs Attributable to the Presence of the College

$$J_L = F + (j)\ [(E_L)_{CR} + (OC_{M,PS})_{CR}]$$

F = total number of faculty and staff

j = full-time jobs per dollar of direct expenditures in the local environment

$(E_L)_{CR}$ = college-related local expenditures (model B-1.1)

$(OC_{M,PS})_{CR}$ = operating cost of government-provided municipal and public school services allocable to college-related influences (model G-2)

Model I-2

PI_{CR}

Personal Income of Local Individuals from College-Related Jobs and Business Activities

$$PI_{CR} = (f_L)(W_F) + (p)(E_L)_{CR}$$

f_L = proportion of faculty and staff residing locally (see model B-1.1.2.1)

W_F = gross compensation to faculty and staff

p = payrolls and profits per dollar of local direct expenditures

$(E_L)_{CR}$ = college-related local expenditures (model B-1.1)

Model I-3

DG_{CR}

Durable Goods Procured with Income from College-Related Jobs and Business Activities

$$DG_{CR} = (i)(PI_{CR})$$

i = proportion of total income typically used to purchase durable goods

PI_{CR} = personal income of local individuals from college-related jobs and business activities (model I-2)

H. PERSPECTIVES ON ECONOMIC IMPACT STUDIES AND RELATED POSSIBLE EXTENSIONS OF THE INVESTIGATION

It goes without saying that an economic impact study of a major educational institution deals with only a miniscule portion of its general impact on the life of the surrounding community. Many other kinds of study and program can be envisaged as part of an institution's desire to relate more effectively to its human and non-human environments.

The first question that arises is "why do such a study?". The attached statement on ESTIMATING THE IMPACT OF A COLLEGE OR UNIVERSITY ON THE LOCAL ECONOMY, prepared by the Systems Research Group, project consultants on the Pittsburgh study, give some of the reasons and suggests approaches to the work.

At the University of Pittsburgh, the study team and the members of the University-Urban Interface Program research group reviewed the implications of the base-line study and developed the attached series of possible topics for future economic impact studies. These might be considered as topical suggestions for consideration by other researchers contemplating such a study for the first time.

In addition to these kinds of extensions, there is of course the broad area of university-community relations in general, such as those dealt with by the University-Urban Interface Program at Pittsburgh. An initial investigation of an institution's economic impact may be a first step towards a broader approach to these important areas of problems and opportunities in an urbanizing society.

George Mowbray
Systems Research Group
252 Bloor Street West
Toronto 5, Ontario, Canada

May 19, 1972

ESTIMATING THE IMPACT OF A COLLEGE OR UNIVERSITY ON THE LOCAL ECONOMY

WHY CONDUCT SUCH A STUDY?

An economic impact study can be useful to the board and president of an educational institution in several ways:

- Make local citizens more aware of the economic advantages of having the institution in their community;
- Strengthen the college or university's appeals for funds to local and regional businessmen and corporations;
- Inform local political leaders and citizens on the taxation issue, or more specifically that the institution should not pay local taxes;
- Clarify the tax gains to municipal, county, and perhaps state governments from the economic effects of the institution, its staff, students, and visitors;
- Provide an impressive measure of the extent to which the institution supports the continued growth of the local economy or prevents it from declining in employment and investment;
- Help show members of the university community itself how their organization benefits the surrounding area economically as well as through its educational mission.

BACKGROUND

Early in 1971, the American Council on Education published a report by John Caffrey and Herbert H. Isaacs, entitled Estimating the Impact of a College or University on the Local Economy. This study, which was supported by the ESSO Education Foundation, was a first attempt at developing a comprehensive, balanced methodology. It considered both the positive and negative economic effects of the institution.

IMPLEMENTATION EXPERIENCE

In 1971, under Dr. Caffrey's general direction, with George Mowbray of the Systems Research Group as Principal

Investigator, a pilot implementation was made of the Caffrey-Isaacs methodology at the University of Pittsburgh. Pitt's University-Urban Interface Program, whose research is under the direction of Professor Robert C. Brictson, decided to include an economic impact study in a series of projects being carried out under a grant from the U.S. Office of Education. The Pitt impact study was conducted in the fall of 1971 and the report was scheduled for release in the spring of 1972.

The University of Pittsburgh is a large, complex institution. It has a multitude of relationships with local people and organizations. This environment was therefore appropriate for a test project. It enabled the researchers to make useful modifications in the methodology and to gain sound experience on how to conduct such studies.

PROJECT PROCEDURE

In its consultation on economic impact studies, the Systems Research Group begins by helping the client institution decide on a number of key elements in the work:

- Definition of the "college" or "university" boundaries for analytical purposes;
- Definition of the "local economy" on which the impact is to be measured statistically;
- Definition of what is to be connoted by "local business", and the statistical base by which this outside activity is to be represented;
- How should capital outlays be dealt with?
- What rules should be used for analyzing the value to the institution of any local tax exemptions it enjoys?
- Plans for surveys of students and employees (and visitors if needed) to record the amount and location of their expenditures of selected kinds;
- Establishment of internal and external advisory committees, especially to plan to get the important contributions that key faculty members can make to the design of the study for their own institution and community;
- Organization of the project group, internal liaison representative, reports, schedule.

CONSULTANT'S ROLE

The scope of the consultant's role is subject to negotiation. It can be structured to varying degrees of participation and research by client personnel.

More specifically, however, the consultant has these basic roles:

- Ensures that the study is objective and factually accurate. This "independence" is an important element in securing credibility and acceptance by outside audiences. The consultant in this role is something like an auditor who certifies that the facts in a report are correct to the best of his knowledge and in accord with approved practice;

- Provides expert assistance in questionnaire design and computerized data processing of the results -- for student and staff survey, visitor survey if required, etc.;

- Applies his experience in internal project organization, including the process of selecting internal and external advisory committees;

- Provides the advantages of experience in data collection through interviewing, sampling records, analyzing past financial statements and reports;

- Supplies valuable services in report writing, editing, and the making of press summaries.

- Provides a source of secondary advice on any improvements that might be made in institutional research and information systems for continuing review of the impact of the college or university on the community.

FOR FURTHER INFORMATION

Copies of the Pittsburgh report, entitled The Impact of the University of Pittsburgh on the Local Economy, can be obtained from The Secretary of the University, University of Pittsburgh, Pittsburgh, Pennsylvania 15213. (412) 621-3500.

For information on the planning of economic impact studies with the help of consultants, contact George Mowbray, Systems Research Group, 252 Bloor Street West, Toronto 5, Canada. (416) 964-8411.

124 Cathedral of Learning
UNIVERSITY OF PITTSBURGH
PITTSBURGH, PENNSYLVANIA 15213

TO: Dr. Edward Blakely, Dr. Arlon Elser, Mr. Joseph Dutton, Mr. George Mowbray, Mr. Dave Powers, Mr. Bernard Kobosky, Dr. Albert Van Dusen, Dr. Otto Nelson

FROM: Robert C. Brictson

DATE: May 1, 1972

SUBJECT: An Inventory of Possible Topics for Future Economic Impact Studies

1. Trend analyses using base-line data of University growth rate, construction, expenditures, production , businesses' contributions to the community.

2. Delineation of symbiotic collaboration of institution and community, i.e. services, research, and clinics related to data sources,use of results and patients or subjects.

3. Catalytic effects of research and development spin-off,including consultation and community service.

4. Mobility patterns by age groups of selected professional occupations, for both University alumni and those from other schools to determine how the University serves as a magnet that attracts industries and people.

5. Refinement of visitors' expenditure category, e.g. University of Wisconsin in Madison has analyzed their data in a smaller community but with possibly larger football and basketball crowds - they estimate expenditures at $13 1/2 million, $10 million greater than Pitt's. Revised estimates based on more adequate assumptions should make this expenditure more substantial and indicate additional inputs to the community generated by the University.

6. University expenditures impact on community development. Any university chancellor would be interested in having information which would assist in developmental plans within the community. More specific categories as to the types of expenditures by visitors, parents, athletic events' spectators, or students themselves could provide valuable information to potential developers of residential units, motel-hotel accommodations, food suppliers, various types of retail sales stores, theaters and transportation agencies. Expenditure estimates by categories such as construction, wholesalers, manufacturing, personal and business services, general merchandise, food stores, apparel stores, eating and drinking places, lodging accommodations places, etc. would facilitate such inputs by the University.

7. Studies of specific schools, e.g. Dentistry, Medical Research, Medical Clinics, Social Work, School of Education, Engineering, etc.

8. Encouragement of departments and administrative units to work on specific refinements, improved models or assumptions and new topics for subsequent reports, e.g. the Department of Economics, Graduate School of Business Administration, Graduate School of Public and International Affairs-Institute for Urban Policy and Administration all have graduate students and professors who might be interested in developing improved formulas uniquely applicable

to Pittsburgh. This would have both a community and university benefit because of more accurate information based on refined assumptions. Similarly, administrative units who are capable of planning sufficiently in advance for required information would be able to gauge their work accordingly and to proceed deliberately over a fixed time cycle.

9. Assumptions and analyses designed to improve accountability and cost/benefits presentations to the region and state. Pittsburgh could take the lead in working with Pittsburgh Council on Higher Education to develop institutional data for the area and possibly for state-related universities based on our experience. In this way institutions might anticipate the requirements of the state and enable them to prepare improved budget requests sufficiently in advance to allow planning and policy option exploration.

10. Specific studies of athletic visitors and the cost-benefits of spectator sports - a refinement on Blakely data enriched by University of Wisconsin categories. Item 5 includes parents,academic,tourist,business,and other visitors.

11. Analysis of the student voter and his impact on the community. University-Urban Interface Program data already has provided some profiles of student attitudes within Pittsburgh. With the upcoming state and national elections more information will be available for refined analyses.

12. Social area analyses data to provide community profile information to community agencies and to foster cooperative enterprises between the University and public service groups.

13. Studies of University small businesses.

14. Studies of minority contracting services and construction.

15. Studies of tax options and alternatives.

16. Ombudsmen or service operations designed to acquire improved information on community needs facilitating more effective collaborative planning and University-community interaction.

17. Inventory and analysis of experiential learning assignments of the university to determine contribution of student placements and projects to community.

18. Reaction to University cultural lectures, seminars, conferences.

19. Consideration and articulation of institutional priorities and resources devoted to community services,including academic incentives.

20. Incorporation of suggestions garnered from briefings and press conference.

oOo